# Knowledge Sharing in Organizations: An Analysis of Motivators and Inhibitors

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*Knowledge sharing has been identified as critical to the management of knowledge in organizations. However, in practice, problems with knowledge sharing have proved to be a major barrier to the effective management of knowledge. This paper reports on research that identified four motivators and five inhibitors of knowledge sharing within one organizational context.*

Keywords: Knowledge, Knowledge Sharing, Motivators of Knowledge Sharing

Knowledge is increasingly perceived as being commercially valuable and its ownership is being recognized by individuals and the organizations in which they work (Brown & Woodland, 1999; Weiss, 1999) and therefore, knowledge sharing has been identified as critical to the management of knowledge in organizations. Knowledge sharing connects individuals with the organization by transferring knowledge that resides with individuals to the organizational level where it is converted into economic and competitive value for the organization (Hendriks, 1999). However, knowledge sharing is not an activity that takes place seamlessly within organizations. In practice, problems with knowledge sharing have been identified as a major barrier to the effective management of knowledge in organizations (Hendriks, 1999). This paper reports on factors that function as motivators and inhibitors of knowledge sharing from a larger study on knowledge and knowledge sharing in organizations.

## Problem Statement

There is enough evidence to suggest that knowledge sharing is critical to organizations (e.g. Davenport & Prusak, 1998; Hendriks, 1999). However, the dominant idea in the literature related to knowledge sharing is that individuals do not readily share knowledge (Brown & Woodland, 1999; Davenport & Prusak, 1998); and that individuals are motivated to share what they know primarily through financial inducements (Gupta & Govindarajan, 2000; Quinn, Anderson & Finklestein.). These assertions, while they appear to be intuitive, are not based on sufficient in-depth research in multiple organizational settings. This study addressed the need for a comprehensive investigation of knowledge and knowledge sharing in organizations through an in-depth examination of these issues within an organizational setting.

## Theoretical Framework

The following sections summarize some key ideas about knowledge sharing and factors that function as motivators and inhibitors of this process in organizations. The objective here is not to provide an exhaustive review of the literature but to give an overview of the prominent ideas in this area that serve as the theoretical framework for this study.

*Knowledge sharing between individuals.* Knowledge sharing is the process by which individuals make their knowledge available to others. Davenport (1997) defined it as *voluntary* and distinguished it from reporting. While reporting involves the exchange of information based on some routines or structured formats, sharing implies a voluntary act by an individual who participates in the knowledge exchange even though there is no compulsion to do so. According to Hendriks (1999), knowledge sharing suggests a relationship between at least two parties—one that possesses the knowledge and the other that acquires the knowledge. Individuals in organizations have always created and shared knowledge and therefore knowledge sharing was considered to be an activity that took place automatically. Today, there is growing
realization that this is not the case. Knowledge sharing is a dynamic process mediated by complex factors that exist at the organizational, group, and individual levels (Andrews & Delahaye, 2000; Davenport & Prusak, 1998). Despite the importance of the role of individual knowledge and the need for this knowledge to be shared effectively, relatively little empirical research sheds light on how individuals share what they
know within their work settings.

*Dominant ideas about knowledge sharing.* Among the factors considered a significant inhibitor of knowledge sharing in organizations is power politics. The phrase *knowledge is power* is used frequently in the context of organizations. Empirical evidence suggests that knowledge is used at the individual level for both control and defense (Brown & Woodland, 1999), and that if individuals perceive that power comes from the knowledge they possess, it is more likely to lead to knowledge hoarding instead of knowledge sharing (Gupta & Govindarajan, 2000). Withholding information from those perceived to be competitors is often considered useful in attaining one's goals in a competitive environment (Pfeffer, 1980). Research further indicates that professionals zealously guard their knowledge, as they perceive that their own value to the firm is a product of the knowledge they possess (Empson, 2001; Weiss, 1999). Issues of power that mediate the relationships between individuals involved in knowledge exchanges is also thought to influence knowledge sharing behavior (Huber, 1982). However, it must be noted that many of these studies were conducted in situations involving organizational restructuring, mergers, and other highly volatile environments.

Equating knowledge with power has fuelled the notion that knowledge is not easily shared within organizations and sufficient incentives need to be provided in order to prompt individuals to share what they know with others within the organization. O'Reilly and Pondy (1980) indicated that there is a positive relationship between rewards and knowledge sharing behavior among individuals. The relationship between knowledge sharing and incentives was further supported by case studies (Gupta & Govindarajan, 2000; Quinn et al., 1996) which found that significant changes had to be made in the incentive system to encourage individuals to share their knowledge, particularly through technology based networks in the organizations. Yet there appear to be inconsistencies in the literature regarding the role of tangible rewards as means to enhance knowledge sharing in organizations. While there are those who perceive rewards and incentives to be indispensable to knowledge sharing, others argued that the only reason that professionals participate in knowledge sharing activities is the intrinsic reward that comes from the work itself (Tissen, Andriessen, Deprez, 1998). There is also some evidence for knowledge sharing that was not motivated by any tangible rewards (e.g. Constant, Sproull, & Kiesler, 1996). Yet others who argued against the use of incentives to share knowledge claim that in the long run, unless knowledge sharing activities help employees meet their own goals, rewards will not help to sustain the system (O'Dell & Grayson, 1998).

Culture is another factor that has proved to have a significant influence on knowledge sharing behavior in organizations. Regardless of how strong an organization's commitment is to knowledge management, it has been found that the influences of the organization's culture are much stronger (O'Dell & Grayson, 1998). Due to the very complex nature and influence of culture, organizational culture is increasingly being considered a major barrier to effective knowledge sharing in organizations (DeLong & Fahey, 2000; Leonard-Barton, 1995). Empirical evidence of the relationship between culture and knowledge sharing was found among other by Leonard-Barton, 1995, and Pan and Scarborough (1999).

*Other motivators and inhibitors of knowledge sharing*. Other factors that have been identified as influencing knowledge sharing behavior are sensitivity of knowledge (Weiss, 1999), friction (Szulanski, 2000; von Hippel, 1994), reciprocity (Nahapiet & Ghoshal, 1998) and trust (Andrews & Delahaye, 2000; Ghoshal and Bartlett, 1994). The importance of having shared language to facilitate knowledge sharing was identified by several authors (e.g., Blackler, et al., 1998; Nonaka and Takeuchi, 1995; Nahapiet and Ghoshal, 1998; Orr, 1990). While several factors have surfaced from the literature as having an influence on knowledge sharing behavior, empirical evidence for the existence and influence of these factors is sketchy and fragmented. Individual factors that have been identified from different settings and different contexts do not offer a complete understanding of the dynamics that influence knowledge sharing behavior within organizations. This study attempts to address this void by doing an in-depth analysis of motivators and inhibitors within one organizational setting.

**Research Questions**

The purpose of this study was to understand the factors that motivate and inhibit individuals to share knowledge with others within the context of their work environments. The primary research questions were:

1. What are the individual level factors that motivate and/or inhibit knowledge sharing?
2. What are the motivators and inhibitors that come from organizational policies and formal practices?
3. What are the motivators and inhibitors that are influenced by the culture of the work environment and informal practices?

## Method

The focus of this study was on trying to understand knowledge sharing from the point of view of the individuals who worked on the project that was selected as the case of interest for this inquiry. This study was exploring a current phenomenon within a real life setting, making the case study an appropriate research method (Yin, 1994). This study assumes that knowledge and knowledge sharing behavior arise out of and are influenced by the context in which it exists. Therefore it was important to isolate a setting with clearly defined boundaries with a clear context within which to conduct this study. Merriam (1998) further supports the use of the qualitative case study as an appropriate method when the researcher is interested in "insight, discovery, and interpretation rather than hypothesis testing" (p.10).

*The case.* The primary unit of analysis was a project from a Midwest based division of an Information Technology (IT) Services company. Members of the project team were involved in designing, developing, and implementing a new technology based system that would significantly improve the services provided by the company. This particular project was selected for this study because (a) it was an active project involving a cross-functional team, (b) all members of the project team were professionals who would be considered *knowledge workers* as each of their areas was knowledge intensive, (c) the progress of the project and its ultimate success was fully dependent on how individuals with different backgrounds and areas of expertise shared their knowledge with one another, and (d) it provided the researcher with adequate access to collect data. This project also allowed the researcher to focus on one specific group of people who worked together, providing both a clear context and clear boundaries. The project team had just begun the implementation phase when the active data collection process began for this study.

*Sources of data*. An advantage of the case study method is that it allows for multiple sources of data, providing for data triangulation and validation of findings (Yin, 1993). Four sources of data were collected for this study. (1) Observation of 13 team meetings, (2) a sample of 40 e-mails exchanged by team members related to the project, (3) key documents related to the project (4) interviews with 22 members of the team.

*Data collection process.* Data was collected over a period of five months from June to October, 2002. The data collection instruments used in this study drew their focus from the theoretical framework that was created prior to data collection. Observational data was collected by the researcher who attended project meetings as a non-participant observer. All the project team members were informed about the objectives of the study as well as the researcher's objectives as an observer at the meetings. Key project documents and a sample of project related e-mails were obtained from project members. Interviews were conducted with 22 team members, each lasting about an hour and a half. All interviews were transcribed with the permission of the participants and sent back to them for verification. The interview schedules used for the study were designed by the researcher and pilot tested with two individuals from the same organization. An expert in the area of qualitative research also reviewed the interview schedules.

*Data analysis*. Data analysis focussed on uncovering the factors that functioned as motivators and inhibitors of knowledge sharing within the project team. Thematic analysis of data was conducted using the qualitative data analysis tool, *Nvivo*. Each data source was analyzed independently to begin with using sentences as the primary unit of analysis. Guba's (1978) steps for analysis of qualitative data—convergence and divergence, guided the process of data analysis. Convergence involved creating a classification system for the data to identify the things that fit together. Divergence refers to the process of developing the patterns that emerge from the data. All the findings that emerged from the study were shared with the participants and their feedback and verification was sought. The findings were also validated by *methods triangulation* (Patton, 1990), checking the consistency of findings across the different sources.

## Results

Four motivators and five inhibitors of knowledge sharing were identified in this study. The four motivators of knowledge sharing were (a) a feeling of being valued, (b) informal relationships with team members, (c) commitment to the project, and (d) a sharing climate within the team.

*A feeling of being valued.* There was clear recognition among individuals of the knowledge they brought to the team and therefore the value they were able to add to the project. The most important motivator to sharing knowledge within this group was an individual's perception of being valued by others in the group as well as in the organization. This feeling of being valued was manifested through several means: (a) being recognized by peers for

contributions made to the team, (b) having ones opinions and knowledge solicited by team members, (c) having ones expertise in a specific area acknowledged by team members, and (d) the perception of being treated with respect during interpersonal interactions. The example below illustrates what recognition of an individual's expertise by team members mean to them and how it resulted in their willingness to share more with others.

> I guess it gives you more confidence inside that says, If I say something to people they'll listen and they'll believe me. They won't question or doubt what I'm saying.

Soliciting someone's knowledge while recognizing their expertise proved to be a very positive factor for knowledge sharing within the project team. As one individual said:

> There were times when I would go and specifically say, " I know that you're very good at this, you know. And can you help me understand what this means or can you help me understand what you do." …To let them know that I know "I'm not the expert in your area and I'm not trying to be the expert in your area. So why don't you help me?" …"I respect what you are doing on this project because I know you are good at what you do" and that seemed to help.

*Informal relationships with team members.* Having informal relationships with team members outside of their roles within the project was another factor that motivated individuals to share knowledge. Informal relationships allowed individuals to seek out other members of the team either to share their inputs or seek clarifications on things that they were not clear about. Such relationships also facilitated the sharing of knowledge in social settings outside of work. In fact, opportunities to socialize outside of work strengthened informal relationships, which in turn facilitated the knowledge sharing process. One team member described how this worked:

> You know, I guess from my perspective, I've always tried to connect on a personal level, because I think when people feel like they're connected that way, they tend to share more then in their business meetings as well.

Informal relationships with team members also created awareness of other individuals' skills, abilities, and strengthened the social web within the organization. Individuals who knew the skills and knowledge sets of their team members proved vital to the efficacy of knowledge sharing within the team. As one participant described:

> I would say my knowledge was greater in pointing to other people's knowledge. Like I knew enough people, and I knew what their skill sets were, and I knew the different areas that they've worked in. A lot of times I think I was a bigger asset on, "Why don't you go talk to such-and-such because I know that they've worked on, you know, X, Y and Z before and this is very similar."

*Commitment to the project*. A key motivating factor to share knowledge on this project was individuals' commitment to the project—a desire to contribute meaningfully to the project and ensure its success. Most individuals on the team had worked on the project since its inception and were therefore committed to seeing it through. Many individuals were selected for this important project because the organization valued them. So it was also a matter of professional pride for them to ensure that this project was completed successfully. Commitment to the project was manifested in individuals by (a) wanting the project to be successful, (b) valuing commitment in team members, and (c) valuing individual and group learning. One individual described how commitment to the project was a key motivator of knowledge sharing.

> …I want this to be good…. So that I think is what keeps me going and knowing that what I'm doing is providing value to the team.

Most team members agreed that they tended to share more with those who demonstrated a high degree of commitment to the project. As one individual explained:

> People that I tend to share with are people that do care about the project. They are not just doing their job, but they are looking out for improvements that we can make. They are helping me do my job. If there are issues, if there are questions they are ready to roll up their sleeves too.

*Sharing climate within the team.* Most of the participants talked about the openness within the team and how that facilitated knowledge sharing throughout the project. Since team members had been working on this project for a long time, they had opportunities to get to know most of the others on the team and many had built strong informal relationships with each other. One individual described the working climate within the team:

> I think this is a pretty good group. I think we've evolved. It seems like there is a lot of snags here, but as far as communicating amongst the team and working with the team, it's been pretty good. Everyone's willing to share what they know and pull their weight, do their end of the project.

Valuing expertise in others not only functioned as a direct motivator of knowledge sharing; it also enhanced the sharing climate within the team. One individual described how the group was receptive to the knowledge that experts brought to the team.

> It was a good group of people to work with and they were very open to having data administration involvement to help them come up with the terminology and to come up with how made it sense to organize this data. So it

> worked out very well and I don't feel like I really had to step on any toes to establish myself. The group was very open to what I could provide to the team.

Five factors emerged as inhibitors of knowledge sharing on this project. The factors are lack of shared contexts, tacit nature of knowledge, dependence on individuals' abilities to manage the sharing process, cost of sharing, and project setup process and structure.

*Lack of shared contexts.* The most frequently cited inhibitor of knowledge sharing within this group was the lack of shared contexts between individuals from different backgrounds and business areas. Shared contexts refer to having a high level understanding of what each group does within the project and how this relates to the overall business context and project goals. Individuals from different backgrounds and different areas of expertise often approach issues from different perspectives and have to create a common language before they are able to communicate effectively with each other. Shared contexts were not only a function of similar backgrounds and training but also of tenure in the company and the industry. Lack of shared contexts influenced knowledge sharing most significantly in the initial stages of the project when the requirements were being identified. Shared contexts continued to evolve through the life of the project. The lack of shared contexts inhibited knowledge sharing because (a) individuals from different backgrounds had different perspectives, (b) there was a lack of common industry knowledge among team members, (c) there was a lack of a common language for communication among team members, and (d) there was a lack of absorptive capacity in recipients. The following examples illustrate how the lack of shared contexts inhibited knowledge sharing.

> I think when it comes to the technical side, the development side, sometimes it's hard to ask them about how things work from a technical stand point when you're very non-technical. So say a customer comes to me or for part of this project I need to understand something technical and I maybe write an e-mail to [a developer] or [the chief designer] and their response will not be at all what I was expecting. Like they did not understand where I was coming from so I have to rephrase it or stop by and just try to explain. It's like pulling teeth sometimes. So it is challenging, it's just a matter of prying and prodding and re-wording and trying to get what you need… because it's just a different world. Their understanding of the system is the code behind it and to me it's the screens, its what the user puts into it. That's the challenging part.

Another participant said:

> In this project I felt that on a really higher level you can share, but as you go down deeper it's not possible because it's so varied and the things that people work on are so varied. We cannot share it with everybody, but with only a certain number of people.

*Tacit nature of knowledge.* Individuals carry knowledge in both tacit and explicit forms. Much of the knowledge that individuals possess tends to be tacit in nature, especially as individuals move up the ladder from novices to experts. Since many of the individuals selected to be part of the project team were those considered experts in their areas, it was clear that they were bringing with them a significant amount of tacit knowledge based on their experiences in their areas of specialization. This tacitness of knowledge negatively influenced individuals' abilities to share what they knew with others. One individual described how hard it was to document a process that was part of the knowledge base of a another individual who had expertise in that area.

> So that was one of the times when it was very intense where we would sit down and I would document how--what a score model consists of and then how its processed. Step by step. It was very tedious and very difficult because he knew it very well but he had a hard time communicating it. Because it is just in his head. You know, its just one of those things where "I don't how we do it, we just do it". And that's really difficult to work with. When you're trying to ask these questions and starting from ground zero.

Another individual pointed out that tacit knowledge, since it is not easily captured in any tangible format, is not easily shared between individuals.

> I think that's an issue because people retain all this information in their head instead of in a document someplace so that its not easily exchanged on to the next person.

*Dependence on individuals' abilities to manage the sharing process.* In situations where individuals lacking shared contexts had to come together to share specialized knowledge, much of the success of the sharing effort depended on the abilities of individuals to communicate with team members. These abilities related to structuring and sharing knowledge in a manner that was easily absorbed by others within the team. Most of the participants talked about the conscious effort involved in assessing the knowledge needs of other team members and the effort and time spent in structuring their communication so that it was effective. Effective sharing of knowledge involved the ability to adapt to and develop multiple strategies of sharing to ensure that everyone on the team had a basic understanding of critical issues related to the project. One participant spoke about the importance of making a conscious effort to share the same knowledge differently with individuals from different backgrounds.

> …it goes back to that breaking it down into plain English as best you can…I would say I've got the ability to take technical information and translate it into a form that different groups can understand. So, yeah, you'd have to make that conscious effort to switch gears so to speak when you're going between two different groups.

Another individual explained how finding a medium of sharing that worked for most members helped the sharing of knowledge that would otherwise be challenging.

> …And I realized quickly with this team that most of the people were visually oriented. And I find that drawing pictures helps [the team] gain some perspective on complex situations

*Cost of sharing*. The primary costs involved in knowledge sharing were time and effort. Individuals on this project were conscious of the costs of sharing and wherever possible were keen to minimize these costs for themselves. Individuals were particularly conscious of the high cost of sharing in those situations related to (a) the perceived utility of shared knowledge:

> Like someone coming and asking me--asks me to explain stuff to him or her at a microscopic level. It doesn't make sense. You don't even care. You are not going to work on it or anything like that at that level. It's my job. And I'm wasting my time explaining to him because I know that it's completely useless to him and explaining this to him is completely useless to me.

(b) cost of sharing with individuals who should already have known it:

> The only time I get frustrated is when you share it once and you're expected to share again with that same person. That's kind of frustrating. Granted people don't always remember everything, I mean, I tell you something once. You go away. You come back. I tell you something again. That's okay still, but the third and fourth time is when it's like, "Okay, how many times do I have to explain this to you?"

*Project setup process and structure.* While the openness within the team and the relationships shared by individuals were motivators of knowledge sharing, some aspects of the structure of the process obstructed the smooth flow of knowledge at times. Some issues with the project structure included the setup processes involved in the initial stages of the project, and project practices that developed over the project life cycle. Issues with the project setup process and structure was manifested in three areas: a) not knowing all team members, (b) not having clarity on roles and responsibilities, and (c) lack of awareness of developments on the project. One individual described how early on in the project, not knowledge all team members resulted in ineffective knowledge sharing that resulted in a lot of rework for the team.

> Initially when [one group] were building the strategies and all that, things used to go haywire. And we did not know what was happening and the communication was really, really bad. It was like basically nobody knew what was happening and nobody knew who was on the team. I think that one of the reasons was because we were at two different locations and we never had any face to face meetings or anything like that. We did not have any track of what was happening and there were too many gaps. We had to redo a lot of stuff because of those gaps.

During the early stages of the project, developments on the project were often not shared with the whole team and this resulted in some individuals feeling like they could have contributed more of what they knew if they had been given a chance to do so.

> I and the rest of the consultants didn't get a whole lot of input on it. You know, we have ideas that maybe [the business owner] didn't have or the programmers or anyone else… So maybe we should have been brought in and like said " are we on track? Here's what we've done so far". Kinda run it by different groups and get their feedback. And do that periodically.

**Discussion and Conclusion**

The findings of this study revealed some new factors that have not been identified in the literature so far while confirming some other well known motivators and inhibitors of knowledge sharing. The literature in this area overwhelmingly favors the *knowledge as power* notion, suggesting that individuals who recognize the value of their knowledge are not very likely to share it with others around them. In contrast, this study found that while individuals within the project group were aware of the knowledge and expertise they brought to the project team and the value of their knowledge, this awareness did not result in knowledge hoarding. It was found that individuals were motivated to share their knowledge with others so long as others in the team recognized them and the contribution they were making to the team. The willingness of individuals to share what they knew with others despite empirical evidence supporting knowledge hoarding and the need for monitory rewards indicates that the process of knowledge sharing is far more complex than it is generally thought to be. This finding points to the need for HRD professionals to consider designing recognition and reward systems linked to knowledge sharing that are not focussed only on tangible reinforcements. However, it must be noted that the results of this study cannot be generalized to a wider

population due to the research method. More research is required to verify if the results of this study are consistent with motivators and inhibitors of knowledge sharing in different organizational settings.

An important issue in the literature regarding knowledge intensive work and knowledge workers is the commitment of knowledge workers to their work vis-a-vis their organizations. Several authors have suggested that knowledge workers are more likely to be committed to their professional groups than to the organization in which they are employed (e.g., Quinn, et al, 1996; Zuboff, 1988). This study provides some empirical evidence regarding the commitment of knowledge workers to their organizations and the impact of this commitment on knowledge related behaviors in organizations. More research is required to verify these findings in multiple organizational settings.

The results of this study reinforce the importance of organizational cultures and sub-cultures in maintaining and nurturing an environment that supports knowledge sharing. It also pointed to the fact that informal relationships between individuals who work together not only create a social web within the organization but also has a direct impact on knowledge sharing behaviors of individuals within work teams. The field of HRD has an important role to play in nurturing and managing organizational cultures that facilitate knowledge sharing. While more research is required to tease out those elements that directly influence knowledge sharing, practitioners can focus on building initiatives that support the creation of strong social webs within organizations based on what is already known in this area.

The influence of individuals' abilities on the sharing process within the team is an important finding. The influence of individuals' abilities on the effectiveness of the knowledge sharing process reinforces the importance of the role of individuals in knowledge-related activities and initiatives in organizations. Bonner (2000) suggested that HRD could exert more strategic influence within the firm through involvement with knowledge related initiatives. HRD's traditional role of developing human expertise and advancing organizational learning can be extended to the management of knowledge in organizations by maximizing motivators while controlling or trying to work around inhibitors of knowledge sharing.

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